p 5 "Search' Names Names." Operation "Search" /"Poisk"/, within the framework of Radioexpedition "Victory-40" /Pobeda-40/ has identified many veterans of the Great Fatherland War who are now amateurs, among them: Rudol'f Ivanovich Sheshin, UA3UY; Viktor Aleksandrovich Rumyantsev, UA1GI; Viktor Vasil'yevich Yurchenko, UA3WU; Ivan Petrovich Skotnikov, UW3IO.

pp 5 - 7: "ON THE AIR FROM THE SIXTH CONTINENT," by L/eonid/ Labutin, UA3CR, Moscow. Continuation/conclusion of article begun in Radio #10/1983.

Labutin and another member of the expedition, Red'kin, were transported to the Dufek mountain area by IL-14 and left there. Unable to reach other Antarctic stations on account of propagation conditions, they set up, within an hour, an earth station and at 2328 hours 6 February got into 'phone with PY3BZM via RS-6, 10 minutes later contacted him again via RS-8, and ten more minutes later RS-7 came by with its robot switched on. They made QSO's 367 and 371 with the robot. No sooner had the robot disappeared over the horizon than RS-5 appeared. Operational commands flew into space, and the electronic memory on board the satellite was opened, and the message sent: "Labutin, Red'kin pribyli v Dufek. Vse khorosho, 73." /"Labutin and Red'kin have arrived at Dufek. Everything's OK. 73" The Morse letters sent may have been "Labutin, Redxkin pribyli w Dufek. Wse horo----o, 73." Tr./

At Dufek they also did an experiment involving the transmission of cardiac data taken by Dr. M. Malakhov of the expedition, coded in digital form, sent by short wave to Dufek (900 km away), put into the memory of the "Polyus" sets they had with them, and sent into space at the next passage of RS-5. The radiogram containing these data was taken out of memory 48 minutes later by the operators of the Central Reception and Command Point in Moscow and its contents were telephoned to the biophysics institute of the Ministry of Health of the USSR for decoding and computer analysis. Several hours later the medical conclusion was received via satellite and immediately transmitted to Malakhov.

Satellite communication for linking up between points in Antarctica during periods of poor propagation proved possible and satisfactory, although on account of fading and Doppler effect only trained radio operators could do the job. The work done thus far could serve as the basis for simple space repeaters placed in near-polar orbit or housed within serially-produced satellites such as the "Meteor" type. Joint use of amateur satellites is also obviously possible when propagation drops out or in emergency situations.

Skills acquired in "foxhunting" were used to design a system for locating supplies of food and equipment left at predetermined locations beforehand. Radiobeacons and direction-finding receivers were used.

Imagine yourself in the Antarctic. Minus 50° C. No visibility. How can you determine your location or where to move next? The idea was born of conducting an experiment using the Kospas-Sarsat system, begun in 1977 by specialists of the USSR, USA, Canada, and France; the Soviet Union launched the first satellite in the "Kospas-Sarsat" system on 30 June 1982, in a circular near-polar orbit with an altitude of approximately 1000 km and a period of about 105 minutes. Buoy systems were just being tried out when the visit to Antarctica was made. At s particular time when the satellite was within view of the Antarctica, a buoy was switched on, and its signals were sent to the satellite, which "dumped" the information in Moscow, and the coordinates were calculated, and either by short wave or via "Radio" satellites memories it was transmitted to Antarctica. Several times we asked the astrologers of "Druzhnaya" station to determine the coordinates of the buoy. A comparison showed that there was a 1 - 3 km difference. Now the specialists will need to

decide whether it is possible relay fully on the satellite system and give up theodolites, which require good weather and are hard to use during heavy frost.

The last days on the air were 25 and 26 January. A report was sent from "Druzhnaya" on the work accomplished thanking those who took an active part in it: UA3HR, UA3APT, UW3FW, UW3HV, LZ1AB, LZ2CQ, LZ2VU, 4K1D, 4K1H, 4K1G, UK3ABO, UK3KP, and many others. The last radiogram was sent on 4K1A, board the RS-5 and circulated every minute and a half around the world: "Thanks to all for their cooperation in the antarctic expedition. We are shutting down operation. Til further meetings on the air. 73." /In Morse -- i.e., how it would be sent, not how it would sound -- "Wsem spasibo za sotrudni---.estwo s antarkti---.eskoj ..-..kspediciej. Zakan---.iwaem rabotu. Do buduqih wstre---. w ..-..fire. 73." In normal transcription: "Vsem spasibo za sotrudnichestvo s antarkticheskoy ekspeditsiyey. Zakanchiveyem rabotu. Do budushchikh vstrech v efire. 73."/

pp 8 - 9: "CQ - U."

INFO*INFO*INFO, by A. Gusev, UA3-170-461.

"Achievements on 160m." For the second time a list of leading stations, based on the R-150-S listing of countries and territories of the world, is being published:

| Call | CFM QSO's | WKD QSO's |
|---|---|---|
| UT5AB | 89 | 101 |
| UT5BN | 73 | 87 |
| UA3PFN | 58 | 81 |
| UA3QGO | 56 | 76 |
| UB5ZAL | 56 | 74 |
| UA2FCW | 54 | 65 |
| UM8MAZ | 48 | 55 |
| UO5ODB | 47 | 58 |
| UA4WBJ | 45 | 69 |
| RA3AQO | 43 | 47 |

/separate listing:/

| | | |
|---|---|---|
| UA9MR | 42 | 53 |
| RC2ICC | 39 | 48 |
| UA6WCB | 37 | 46 |
| UL7MAR | 33 | 42 |
| UF6FHC | 30 | 30 |
| UJ8JKO | 23 | 35 |
| RP2BDP | 21 | 21 |
| UAØQEZ | 13 | 16 |

RA3AQO has the best result among ultrashortwavers, EZ6PAC (37 CFM QSO's/37 WKD QSO's) among beginners, and UK5IDO (41/41) among collective stations. The editors request further reports by 1 February.

"QRP News." During summer vacation S. Zhemaytis, UA3QGO, from Voronezh /see above - Tr./, operating with a UW3DI transceiver without amplifier with a power of 1 Watt, had about 200 QSO's -- 59 on 160, 90 on 80, 14 on 40, 15 on 20, 5 on 15, and 11 on 10 meters. The most distant stations worked on160m were RA9CUC, RI8LBR, RI8LBU. On 40m he worked EK1AFX, on 20 UK1PGO, EKØKA, and 4K1B, on 15 JA9XKS, and on 10 YV3Yr. A Delta antenna was used near the Voronezh River, suspended 5 to 10 meters above the ground and 81 to 92 meters above water level.

VHF*UHF*SHF, by S. Bubennikov.

"World Communications Year: SNERA." July was not much of a month for participants in the radioaurora experiment. Only one report of an opening was received, from UA9FCB for 24 July. Yet SM4GVF and SM6EOC spotted openings on the 7th, 17th, 23rd, and28th; on these days they worked stations located in northern Scandinavia.

"Ultrashortwave Competitions." ... The UK3AAC team again had good results this year in field day, working stations in 103 locator squares -- compared to 84 in 1982, 61 in 1980, and 55 in 1979. This year ten squares were worked on 1215 MHz by UK3AAC/U3L, the farthest UR2EQ 548 km away.

"Meteors." The 1983 Perseids meteor showers were below prediction. (Maximum: 11 - 12 August.) Nonetheless, some ultrashortwavers had good results. UA6YAF and UA6YBH, operating from square UG, had 28 MS QSO's with 14 squares. Again as last year UG6AD, UG6GBD, and RG6GBT went up to the mountains, to an altitude of 2100 meters, and even though the

horizon was blocked by other mountains, they had a large number of meteor contacts. The most interesting event, though, was that UG6AD, for the first time in many years of ultrashortwave operating, succeeded in establishing tropospheric contacts with UA6YAF and UA6YBH 730 km away. UA3MBJ also operated under field conditions, from rare square SR. He didn't have a tape recorder, necessary for meteor equipment, but tried operating CW at 100 characters a minute. His results: Twelve QSO's, with UA4CDT/UB5LNR/UA6YAF/SM6CMU/SM5BEI/UA9SEN/SP6ASD/Y21PL/OZ1OF/OZ1EYX/SM6AEK/SM6EOC, and two contacts on SSB with OE3XUA and SP6FUN. UA3TCF got 6 new squares, from UK6YAG, OH7TN/8, OH6CH, OK1AFN/p, Y22UL/p, and Y39ZA. UA4CDT's farthest QSO was with OK1KKH 2300 km away; he was also heard by DKØTU and DK7RW/A (2590 km).

pp 10 - 11, 31: "RAEM," by A. Kiyashko.

The eightieth anniversary of the birth of Ernst Teodorovich Krenkel' is celebrated 23 December 1983. Several generations of boys and girls have taken as their example this outstanding radioman, Hero of the Soviet Union, and participant in many polar expeditions.

His book "RAEM is my Call-sign" unfortunately was cut off, by his sudden death, at 1938, the year he returned from the drifting station "North Pole 1."

As he told it himself he became a radioman by accident. But the fact that he became an outstanding radioman and polar explorer was by no means accidental.

Usually the road to becoming a professional radioman leads through amateur radio; Krenkel' first became a professional, then an enthusiastic radioamateur shortwaver. He remained a tireless propagandist of the short waves literally up to the last days of his life.

In the early thirties Krenkel' became a constant writer for our magazine and for over a quarter of a century was a member of the editorial board. It's impossible to overestimate his role as an organizer of amateur radio activity. Beginning in 1946 he headed the Council of the Central Radio Club, and beginning in 1959 with the establishment of the Federation of Radio Sport was its Chairman without a break.

On the occasion of the 80th anniversary of his birth, the editors have turned to articles by Krenkel' himself in the magazines "Radio-front" ("RF") and "Radio" ("R").

The road to radio began unexpectedly for the 17-year-old Moscovite, when he saw an announcement on the street for a nine-month course for radiotelegraphers, in 1921. He finished first in speed and was recommended to the Lyuberetskaya PTT reception station near Moscow.

In 1924 he went to Leningrad, was hired by "Sevledok," the Arctic expedition organization, and first traveled to the Arctic, spending the winter as a radioman on Novaya Zemlya /New Land/.

On his return he was drafted into the Red Army. He was released into the reserves in 1926.

In this period Krenkel' learned of the surprising properties of shortwave in covering tremendous distances with low power. Shortwave was given over to amateurs as the specialists did not then believe in its reliability for communication.

Krenkel' wanted to test shortwave equipment in the North. He got the shipping and research authorities together, received equipment, and traveled back to the same station on Novaya Zemlya where he installed a shortwave transmitter and worked (amateur) stations in Baku, Moscow, and Leningrad. The winter of 1927 - 28 passed by quickly. Krenkel' "invented" his first call-sign for working amateurs -- PGO - polar geographic observatory.

/For anyone tracking with the original article, we are now at the first complete paragraph on page 11 - Tr./

Back in Moscow, E. T. Krenkel' learned that an expedition to Franz-Josef Land /Zemlya Frantsa-Iosifa, sometimes abbreviated ZFI/ was being formed. By this time he was already a fairly well-known polar radioman and was taken on.

On 30 August 1929 the northernmost radiostation in the world went on the air with a 250 watt transmitter, maintaining regular contact with the nearest station at Matochkin Shar on the 40-meter band.

On 12 and 13 January two-way communication was established with the Byrd Expedition in Antarctica. After regular operation ended at 1140 MSK on 12 January, Krenkel' called CQ. A station came back with such strength that he thought it must be near by. It identified with the American call-sign WFA and it turned out to be "our antipodes." Contact lasted 1-1/2 hours and was repeated the next day with equal success.

Krenkel' returned and became chief of the Central Shortwave Section station, all winter long bombarding Prof. V. Yu. Vize /Sp?/ with letters asking about future expeditions.

At that time the international society "Aeroarktik" was preparing an arctic flight by the German dirigible "Graf Tseppilin" and Krenkel' was one of four Soviet members of the expedition.

The dirigible carried a 'phone-c.w./longwave transmitter with a power of 150 watts, a 50-watt shortwave transmitter.

The flight, over the route Berlin - Leningrad - Arkhangel'sk - Zemlya Frantsa-Iosifa - Severnaya Zemlya /Northern Land/ - Cape Chelyuskin - Dikson Island - Cape Zhelaniya - along Novaya Zemlya /New Land/ - Arkhangel'sk - Leningrad - Berlin, took 104 hours. As a result Krenkel' recommended that the Soviet Union undertake the training of personnel for Soviet airships and the development of satisfactory equipment.

On 28 July 1932 the icebreaker "Aleksandr Sibiryakov" left Arkhangel'sk to attempt the trip via the Northern Sea Route to Vladivostok in one summer period. Yevgeniy Nikolayevich Gershevich and Krenkel' were the two radiomen.

Krenkel' wrote later that radiocommunication during the above expedition was difficult on account of the scarcity of stations along the northern coast of the USSR.

The next year O. Yu. Shmidt invited Krenkel' to be chief radioman for a voyage on the Northern Sea Route on the steamship "Chelyuskin." On 13 February 1934 the "Chelyuskin" was crushed by ice in the Chukotsk Sea and sank. The legendary camp of Shmidt arose on the Arctic ice.

A radio brigade erected masts and a receiver was finally put in service. Krenkel' heard Uellen asking Cape Northern /mys Servernyy/ whether "Chelyuskin" signals had been picked up.

But communication was only established the following day.

The tent with the radiostation became the headquarters tent, and the camp of Shmidt remained for two months. On 13 April the last six people, among them Krenkel', were flown out. Before leaving he sent a final message saying no more traffic and gave the call-sign RAEM three times; he didn't know at the time that it would soon be assigned to him as his amateur call-sign.

/The next paragraph is split between page 11 and page 31./

In 1935 - 36 Krenkel was in chage of a wintering on Cape Olovyannyy (Archipelago Severnaya Zemlya) and on Domashniy Island. Long wave was used exclusively.

The year 1937 was history-making in the Arctic -- the first drifting station "Servernyy polyus-1" /"North Pole 1"/ was set up by a team air-lifted to a location near the North Pole. Krenkel' was among the four on the team, whose operation lasted 275 days. The station UPOL, no matter how bad the conditions, was in regular operation, and

Krenkel' even managed to find time for contacts with amateurs.

Several days after the team landed, Krenkel' sent a message announcing its arrival at the North Pole. The station "North Pole" went on the air 21 May 1937; later it worked amateurs.

In an article in "Radio Front" /predecessor of "Radio"/, Krenkel' suggested a contest based on contacts with the pole.

He wrote in his diary about amateur contacts with Leningrad on 30 June 1937.

After returning from the drifting station, E. T. Krenkel worked at senior posts in the Northern Sea Route administration and at weather service headquarters. In later years he headed the scientific-research institute for weather service instrument-building. In 1968 - 69 Ernst Teodorovich Krenkel' was again in the Antarctic, heading a trip by the scientific-research ship "Professor Zubov" and realizing a dream of his of setting foot on the sixth continent.

And all these years RAEM was heard regularly on the shortwave bands. He also, despite his heavy responsibilities, did volunteer work, actively contributing to the development of amateur radio and radiosport.

In conclusion, two quotes from Krenkel' articles are given: "Oh, how good it after a long break to plunge into the airwaves again! Again, holding your breath, guessing at, more than hearing, the call-signs of exotic DX stations... Too bad that the superhet has only eight, and not eighteen, tubes. Too bad, that the power of the transmitter must not exceed a hundred watts. Oh! to bang around on twenty meters with a kilowatt and in one night wrestle all all continents to the ground. How annoying that besides short waves there exist in the world streetcars, elevators /Eng. - lifts! Tr./, electric bells, x-ray equipment, and other Egyptian tortures for shortwavers." (RADIO #1/1946)

"If in the middle of the night in the sleeping city one lonely window is lit, you can be sure there, in his own little corner, a shortwaver is operating. He has already been sitting there several hours by his receiver and will continue to sit there a long time, hunting, among the audible sounds and murmurings in his earphones the call-sign of just such an enthusiast as himself." (RADIO #5/1966)

Thus could a person think and write who had a close relationship for all of his life with the astonishing world of electromagnetic waves. Such a person was Ernst Teodorovich Krenkel'.

p 12: "EVERYTHING BEGAN WITH A QSL," by Tony Smith, G4FAI, London.

I didn't know, when I made a QSO with UK1APA from Leningrad on 19 December 1978, on 20 meters with two watts of power, that G. Karpov, UAØ-112-2, from Blagoveshchensk, was copying my signals.

After a while I received his SWL QSL with the picture of a person who was somehow connected with the Arctic. /A familiar Soviet QSL card with E. T. Krenkel', scenes from the Arctic, and the call-signs 4LOK, UKOQ/M, RAEM, and UPOL / HERO OF THE SOVIET UNION / E. T. KRENKEL' / 1903 - 1971 depicted, appears with this article. Tr./

Part of the text was written in Russian, which I didn't understand, and the only thing I could read was the call-signs RAEM and UPOL.

In June 1980 I read an article in "CQ" magazine on postage stamps devoted to amateur radio, and one of the stamps illustrated was practically identical to the QSL card from Blagoveshchensk.

Meantime, having received several similar cards from Soviet amateurs, I concluded that E. T. Krenkel' must have done something unusual or important.

My local library didn't turn up anything, but another, with a collection on the Soviet Union, revealed that E. T. Krenkel' had been a radioman on the "Chelyuskin" and had participated in the I. D. Papanin expedition to the North Pole.

After I had collected some more ideas and dates I decided to dig through newspapers dating back to 1933 - 34 and there found reports on the heroic episode involving the rescue of the passengers and crew of the "Chelyuskin" and Krenkel's role in it.

Then I began to read through newspapers from 1937 - 38 and read the amazing story of the expedition to the North Pole, described in great detail in the British newspapers of that time.

I decided to try to obtain more information about Krenkel' and about the expedition.

With the help of a specialized library I got two books in English, "On the Roof of the World" by L. Brontman, a correspondent who flew with the Papanin group to the North Pole, and "Life on the Ice," by I. D. Panin himself.

I learned with interest that Krenkel' had left his receiver with the editors of "Radiofront," to be given to the first amateur to make contact with him (as UPOL) at the Pole. So far I haven't been able to find out who this fortunate amateur was. Maybe he's alive and maybe he still has this receiver. (Footnote to article: "The radioamateur, to whom E. T. Krenkel's receiver was presented, was Leningrad Leningrad shortwaver V. Saltykov, who perished in the years of the Great Fatherland War.")

I wrote to the Central Radio Club, knowing it had been named after E. T. Krenkel', for more information on this interesting person, and soon received a detailed letter and a book written in 1973 by V. A. Burlyand about Krenkel'. A friend who knows Russian helped me read the book.

Now I knew not only the meanings of the call-signs RAEM and UPOL on the QSL card but also what the name E. T. Krenkel' meant to Soviet radioamateurs.

Not long ago I wrote an article, "RAEM Calling," which was published in the British magazine "Practical Wireless" and based on the limited material at my disposal.

I knew of course that there were amateurs in Great Britain who had had contacts with Krenkel' and remembered him. I recently visited one such amateur -- G6QN, who has operated since 1922. He well remembers contacting UPOL and displays a QSL for doing so, received from RAEM.

Soon after my article was published, amateurs began to call me, recalling contacts with UPOL or RAEM and mentioning what an excellent operator Krenkel' was.

The wonderful thing about amateur radio is how it unites people across borders, language barriers, and other difficulties, and also that it includes such people as E. T. Krenkel', who occupies a place of honor in his own country's history and in the world amateur radio movement.

I am glad to have been able to tell about him and am only sorry never to have met him.

When G. Karpov sent me his QSL card, he probably didn't realize how it would affect my life.

As before I operate QRP and have a number of contacts with Soviet amateurs. If you hear me, call. I'll be especially glad if you can tell me something about E. T. Krenkel'.

73, hpe cu vy sn, de G4FAI SK. /In English - Tr./

pp 13 - 16: "BUT WHERE IS THE UW3DI OF THE EIGHTIES?" by S. Kazakov, UA3DNC. /Description of amateur equipment displayed at the 31st All-Union Exhibition of the Designs of DOSAAF Radioamateur Constructors./ There is still no answer to the question posed by B. Stepanov after the 30th exhibition: "Just where is the UW3DI /I think it's a transceiver - Tr./ of the eighties?"

pp 16 - 18: "RADIO-76 M2 TRANSCEIVER," by B. Stepanov, UW3AX, and G. Shul'gin, UA3ACM.